REMARKS

Responsive to the aforementioned office letter, and even though the applicant believed that the claims as originally drafted distinguished over the prior art, the applicant has nevertheless amended this application to further insure that the claims patentably distinguish over all of the references cited by the Examiner and any other prior art which is known.

The Examiner relied upon the Visk Patent, the Walto Patent and the Johnson Patent. At the outset, the applicant has reviewed these references and believes that they are not even relevant to the subject matter cited in the instant application.

It is to be noted that contrary to the position of the Examiner, Visk discloses a device which is a sprinkler and root feeder assembly used for directing liquid in either of opposite directions and which can be used as either a sprinkler or a feeder of the roots of plants. It is in no stretch of the imagination a sprinkler forming part of a sprinkler assembly of the type which is introduced into the ground to enable irrigation of the roots. Ironically, the Visk apparatus is not part of the sprinkler head and is actually remote from the nozzle by some distance.

In the device of the instant application, the stem extends into a duct within the sprinkler head or the adapter used therewith. The shaft 40 in Visk extends into a central hub which is either upstream of or downstream of the sprinkler head, but is not part of the sprinkler head. Almost by definition, Visk then becomes non-analogous prior art. Also contrary to the position of the Examiner,

Visk does not employ a valve stem.

The sprinkler and root feeder of Visk is constructed in such manner that it does not start and stop water flow but, rather, provides for mixing of a combination of water and fertilizer. In Visk, the device directs the fertilizer-water mixture through the sprinkler for application on the surface or actually through a tube inserted into the soil for deep-root feeding. In this respect, the device shown by Visk is not really even part of a sprinkler. By definition, it is not part of a sprinkler head assembly and, particularly, a sprinkler head assembly of the type which is subterranean.

Contrary to the contention on page 2 of the Office Action that Visk can be connected to a subterranean water conduit, it is urged and Visk makes it crystal clear that the water source is actually a movable hose connected to one of the outreaching arms. Please see column 3, lines 39-40 of Visk.

With respect to the position taken on page 2 of the Office Action by the Examiner, it is respectfully urged that the Examiner has erred in the interpretation of Visk. First, Visk does not carry water from a generally upright tube. Rather, the water comes from a hose. Secondly, Visk is not concerned with the upright tube but, rather, is concerned with a fertigation apparatus located below the bottom of the upright tube. No duct exists in the Visk invention. In contrast, the water is delivered to the sprinkler through a series of mixing chambers and tubes. The present invention is concerned with off-on water flow control valve means having a stem

extending into the duct for stopping water flow when in a first position and reinitiating water flow when in a different position. Visk does not disclose any action of that type. In contrast, Visk has a very complex control valve with a stem. Visk notes in column 4, line 37, he uses a valve drum with a plurality of passages for distribution of the liquid. He also directs the liquid flow either up or down and allows for creation of chemical mixtures.

The most salient point with respect to Visk, which is essentially the primary reference relied upon by the Examiner, is the fact that Visk discloses a valve drum which has, essentially, nothing to do with the device in the instant application. In this respect, the claims in the application call for an elongate stem which now extends into a duct. Even if the drum of Visk were considered to have a duct, which is not the case, there is no valve stem extending into that duct. In fact, one could argue that the body of Visk has a duct which receives the drum. However, there is no stem which extends into that duct for rotation in the same manner as described and claimed in the instant application. In reality, there is nothing in that stem which allows for rotation between first and second positions. In the instant application, the stem has a portion which extends outwardly for manual engagement in order to actuate the stem. Nothing could be further from the truth with respect to the valve drum. In reality, one engages a screwdriver or like implement on the end of the stem for rotating same in the instant application. An entirely different arrangement is used in Visk.

Notwithstanding the foregoing, Visk is so completely remote that it is not concerned with a ground irrigation system of the type in the instant application. It is portable and not adapted for permanent mounting. In contrast, the system of the instant application is only for permanent ground installation. In Visk there is no upright tube as such. The insert in Visk is not of any importance since Visk is not attempting to control water flow to a specific area. In the instant application, the water flow control valve includes a stem extending into the duct and is rotatable between first and second positions. This action is not even remote in Visk.

The Walto Patent was cited primarily to show connection of a sprinkler head to a subterranean water conduit. The Examiner contends that this connection to a subterranean water conduit could be used with Visk. However, as pointed out above, Visk is portable and adapted for use in essentially any location. Such is not the case in the instant application. Consequently, Walto would not even be concerned with connection to Visk. Both Walto and Visk essentially have nothing in common and one skilled in the art would never associate a method of flushing debris from a pop-up sprinkler head (Walto) to be used in ornamental landscaping with a hose fed mechanism which could be installed only below the sprinkler and with such mechanism for directing water and fertilizer downwardly. Thus, it is urged that there is no realistic combination between Visk and Walto.

The claims in the application were also rejected on the basis

of Walto and Johnson. The Examiner takes the position that Walto could be modified to incorporate an off-on water control as taught by Johnson. In essence, there are two principal errors in the position of the Examiner by contending that Johnson teaches a sprinkler shut-off valve which extends into a duct connected to an outlet. First of all, Johnson does not teach a sprinkler shut-off valve. Rather, Johnson teaches of a modified ball valve having not one chamber which could allow for off-on water flow control but, rather, has three chambers. Moreover, all of the three chambers in Johnson are for the purpose of testing and draining fire sprinklers to buildings. Pressure testing and draining are not operations associated with water sprinklers and, particularly, water sprinklers used in landscaping.

The Examiner is also respectfully mistaken with respect to Johnson in contending that the shut-off valve comprises a stem 23 extending into a duct. Rather, Figure 1 of Johnson shows a short stem 23 connected to a ball valve. In Johnson, the ball valve lies in the path of the water flow and not the stem as in the instant application. It is true in Johnson that the stem can be engageable manually for rotating to rotate the ball valve. Beyond this, there is little relevance to the instant application.

In practicality, the ball valve mechanism taught by Johnson could not be workable in a pop-up sprinkler system. Walto's device is only applicable to pop-up sprinkler systems. In fact, even if Johnson could be fashioned to operate as a water flow control valve in a sprinkler system, which is highly doubtful, it could only be

applied to stationary sprinkler heads and not pop-up sprinkler heads.

In short, Johnson is lacking in so many ways that it could not be a relevant prior art reference. Some of the missing teachings are as follows:

1. Johnson does not teach of anything that could apply to landscape irrigation;
2. Johnson does not teach a stem extending into a duct;
3. Johnson does not teach of a threaded stem;
4. Johnson does not teach of a method of shutting down water for enabling the servicing of a sprinkler head;
5. Johnson does not teach the purpose of opening and closing liquid flow;
6. Johnson does not teach of a tool receiving area on an end of a stem to enable turning of the stem;
7. Johnson does not teach of a stem having a diametral size at least as large as the duct; and
8. Johnson does not teach of a stem which carries the central opening controlling water flow.

Each of the claims in the instant application not only call for the elongate stem, but the fact that the duct is angularly located with respect to the stem. Moreover, the stem is rotated about a central axis to a position between first and second positions. The claims call for the fact that the rotation allows for water flow control without the need for controlling water flow at the main control therefor or shutting off water flow to other sprinkler head

assemblies serviced by the same subterranean water conduit.

It is respectfully urged that the art of record does not disclose any answering structure and reconsideration is respectfully urged. Claims 9-13, for example, call for a portion associated with the stem which extends outwardly from the duct and is adjustable to control the position of the stem in the duct. Again, the structure does not appear to be answered by the art of record. Claim 13 calls for the opening having a diametrical size approximately the same as that of the duct and new Claim 28 calls for the water flow being proportional to the position of the stem between the first and second positions. The applicant has also added new Claims 29-31 which are dependent upon Claim 9 and call for the portion of the plug extending outwardly from the plug to be integral therewith and which is actually aligned with the plug. Claim 31 in particular calls for a manually engageable element on the valve plug for moving same.

The method of the invention is more specifically set forth in Claims 14-16 and calls for the manual actuation of the valve stem and the rotation of the valve stem between the first and second positions while in the duct of the sprinkler head assembly. The claim clearly calls for the rotation of the plug so as to achieve water flow and to stop water flow. It is urged that the art of record does not disclose any answering method.

The applicant has also added new Claims 21-27. These claims are patterned along the lines of claim 1 and call for the elongate stem extending into the duct and having a portion extending

outwardly of the assembly. They also call for the opening in the stem, permitting water flow through the stem when in a first position and stopping water flow when in a second position. Claims 22-27 are all dependent upon Claim 21. For the reasons advanced regarding the allowance of Claim 21, it is believed that new Claims 22-27 are allowable and allowance therefore is respectfully solicited.

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Respectfully submitted,

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